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| MOORE & VAN ALLEN, PLLC For IBM P.O. Box 13706 Research Triangle Park, NC 27709 |             |                      | EXAMINER            |                  |
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# BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/711,956 Filing Date: October 15, 2004 Appellant(s): DINGER ET AL.

Frederick D. Bailey
For Appellant

**EXAMINER'S ANSWER** 

This is in response to the appeal brief filed March 4<sup>th</sup>, 2009 appealing from the Office action mailed July 31<sup>st</sup>, 2008.

#### (1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

#### (2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

#### (3) Status of Claims

The statement of the status of claims contained in the brief is correct.

# (4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

### (5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

#### (6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

## (7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### (8) Evidence Relied Upon

6178529 Short et al 1-2001

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6038677 Lawlor et al 3-2000

7069558 Stone et al 6-2006

#### (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 13, 18, 23 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Short et al (US Patent 6,178,529).

With respect to independent claim 1, Short teaches:

A method to automatically define resources forming an IT service, comprising:

Tracking resources that have been utilized in responding to a request or set of requests or performing a transaction or a set of transactions; and automatically defining resources that form an IT service by aggregating all resources utilized to respond to all requests or to perform all transactions.

(Column 4 Lines 43-54, discloses an application program interface (API) that will manage the resources needed for execution of said application and will create a cluster to which said resources are going to be added. The API will need to track the needed resources before being able to add them to the cluster)

With respect to claim 2, Short teaches:

Adding any new resources utilized to a resource list. (Column 4 Lines 52-53, discloses adding new resources to the cluster)

With respect to independent claim 13, Short teaches:

A method to automatically define resources forming an IT service, comprising:

Examining each instance of a request or transaction; and maintaining a record of a union of all resources that have been utilized in responding to each instance of a request or to each instance transaction over a selected time period or on a rolling time period basis. (Column 5 Lines 23-36, discloses a database that stores information of the resources in each cluster, configuration of the resources and relationship of this resources and that this information will be updated every certain amount of time or when a change is made to said cluster or a related cluster)

With respect to independent claim 18, Short teaches:

A system that automatically defines resources forming an IT service, comprising:

A processor; and a resource utilization program operable on the processor, wherein the resource utilization program includes computer executable instructions to maintain a record of a union of all resources that have been utilized in responding to each instance of a request or to each instance of a transaction over a selected time period or on a rolling time period basis. (Column 5 Lines 23-36, discloses a database that stores information of the resources in each

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cluster, configuration of the resources and relationship of this resources and that this information will be updated every certain amount of time or when a change is made to said cluster or a related cluster)

With respect to independent claim 23, Short teaches:

A method of making a system that automatically defines resources forming an IT service, comprising:

Providing a processor; and providing a resource utilization program operable on the processor, wherein the resource utilization program includes computer executable instructions to maintain a record of a union of all resources that have been utilized in responding to each instance of a request or to each instance of a transaction over a selected time period or on a rolling time period basis. (Column 5 Lines 23-36, discloses a database that stores information of the resources in each cluster, configuration of the resources and relationship of this resources and that this information will be updated every certain amount of time or when a change is made to said cluster or a related cluster)

With respect to independent claim 28, Short teaches:

A computer-readable medium having computer-executable instructions for performing a method, comprising:

Tracking resources utilized in responding to a request or set of requests or performing a transaction or a set of transactions; and automatically defining resources that form an IT service by aggregating all resources utilized to respond to all requests or to perform all transactions. (Column 4 Lines 43-54, discloses an application program interface (API) that will manage the resources needed for execution of said application and will create a cluster to which said resources are going to be added. The API will need to track the needed resources before being able to add them

Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Short et al (US Patent 6,178,529) in view of Lawlor et al (US Patent 6,038,677).

With respect to claim 3:

to the cluster)

Short does not appear to explicitly disclose removing any resource from the resource list in response to the resource not being utilized for a predetermined time duration.

Lawlor teaches:

Removing any resource from the resource list in response to the resource not being utilized for a predetermined time duration. (Column 5 Lines 10-13, discloses that the constraints for adding a resource to a resource group are based on performance, therefore if the resource is not being utilized it would be removed from the resource group)

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **removing any** 

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resource from the resource list in response to the resource not being utilized for a predetermined time duration because this would permit the resource group be current and resources that aren't being used won't be included in said resource group.

Claims 4-12, 14-17, 19-22, 24-27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short (US Patent 6,178,529) in view of Stone et al (US Patent 7,069,558).

With respect to claim 4:

Short doesn't appear to explicitly disclose determining a percentage of utilization of each resource across all requests or transactions.

Stone teaches determining a percentage of utilization of each resource across all requests or transactions. (Column 6 Lines 45-55, discloses determining a resource value which is a usage percentage of a resource, this allows for controlling the execution of applications on said resource)

It would be obvious for someone with ordinary skill in the art at the time of the invention to combine the teachings of the cited references to implement **determining a** percentage of utilization of each resource across all requests or transactions because this allows for controlling the execution of applications on said resource.

With respect to claim 5:

Short doesn't appear to explicitly disclose automatically assigning a priority to each resource according to the percentage of utilization of the resource.

Stone teaches automatically assigning a priority to each resource according to the percentage of utilization of the resource. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 6:

Short doesn't appear to explicitly disclose presenting a resource list and an associated priority for each resource to a user or requestor.

Stone teaches presenting a resource list and an associated priority for each resource to a user or requestor. (Fig. 6, discloses presenting a list with the resources and their usage percentage)

With respect to claim 7:

Short doesn't appear to explicitly disclose adjusting a status propagation logic based on the priority assigned to each resource.

Stone teaches adjusting a status propagation logic based on the priority assigned to each resource. (Fig. 11, discloses that if the percentage of usage exceeds a determined percentage then the status of the resource will be changed)

With respect to claim 8:

Short doesn't appear to explicitly disclose **presenting a resource utilization** diagram to a user or requestor.

Stone teaches presenting a resource utilization diagram to a user or requestor. (Fig. 6, discloses presenting a resource utilization diagram in a user interface)

With respect to claim 9:

Short doesn't appear to explicitly disclose representing a percentage of utilization of each resource in the resource utilization diagram.

Stone teaches representing a percentage of utilization of each resource in the resource utilization diagram. (Column 6 Lines 45-55, discloses determining a resource value which is a usage percentage of a resource, this allows for controlling the execution of applications on said resource)

With respect to claim 10:

Short doesn't appear to explicitly disclose representing a priority of each resource in the resource utilization diagram, wherein the priority is automatically assigned according to the percentage of utilization of the resource.

Stone teaches representing a priority of each resource in the resource utilization diagram, wherein the priority is automatically assigned according to

the percentage of utilization of the resource. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 11:

Short doesn't appear to explicitly disclose representing a quantity of occurrences of each segment linking resources in the resource utilization diagram.

Stone teaches representing a quantity of occurrences of each segment linking resources in the resource utilization diagram. (Fig. 11, discloses presenting the percentage of usage of each resource)

With respect to claim 12:

Short doesn't appear to explicitly disclose representing a time duration since each resource was last utilized in the resource utilization diagram.

Stone teaches representing a time duration since each resource was last utilized in the resource utilization diagram. (Fig. 11, discloses teaching the time duration of each resource in the application)

With respect to claim 14:

Short doesn't appear to explicitly disclose determining a percentage of utilization of each resource across all requests or transactions.

Stone teaches determining a percentage of utilization of each resource across all requests or transactions. (Column 6 Lines 45-55, discloses determining a resource value which is a usage percentage of a resource, this allows for controlling the execution of applications on said resource)

With respect to claim 15:

Short doesn't appear to explicitly disclose automatically assigning a priority to each resource according to the percentage of utilization of the resource.

Stone teaches automatically assigning a priority to each resource according to the percentage of utilization of the resource. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 16:

Short doesn't appear to explicitly disclose adjusting a status propagation logic based on the priority assigned to each resource.

Stone teaches adjusting a status propagation logic based on the priority assigned to each resource. (Fig. 11, discloses that if the percentage of usage exceeds a determined percentage then the status of the resource will be changed)

With respect to claim 17:

Short doesn't appear to explicitly disclose presenting a resource utilization diagram to a user or requestor.

Stone teaches presenting a resource utilization diagram to a user or requestor. (Fig. 6, discloses presenting a resource utilization diagram in a user interface)

With respect to claim 19:

Short doesn't appear to explicitly disclose the resource utilization program comprises computer executable instructions to determine a percentage of utilization of each resource across all request or transactions.

With respect to claim 20:

Short doesn't appear to explicitly disclose the resource utilization program comprises computer executable instructions to automatically assign a priority to each resource according to the percentage of utilization of the resource.

Stone teaches the resource utilization program comprises computer executable instructions to automatically assign a priority to each resource according to the percentage of utilization of the resource. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 21:

Short doesn't appear to explicitly disclose the resource utilization program comprises computer executable instructions to adjust a status propagation logic based on the priority assigned to each resource.

Stone teaches the resource utilization program comprises computer executable instructions to adjust a status propagation logic based on the priority assigned to each resource. (Fig. 11, discloses that if the percentage of usage exceeds a determined percentage then the status of the resource will be changed)

With respect to claim 22:

Short doesn't appear to explicitly disclose the resource utilization program comprises executable instruction to present a resource utilization diagram to a user or requestor.

Stone teaches the resource utilization program comprises executable instruction to present a resource utilization diagram to a user or requestor. (Fig. 6, discloses presenting a resource utilization diagram in a user interface)

With respect to claim 24:

Short doesn't appear to explicitly disclose providing computer executable instructions to determine a percentage of utilization of each resource across all request or transactions.

Stone teaches providing computer executable instructions to determine a percentage of utilization of each resource across all request or transactions.

(Column 6 Lines 45-55, discloses determining a resource value which is a usage percentage of a resource, this allows for controlling the execution of applications on said resource)

With respect to claim 25:

Short doesn't appear to explicitly disclose providing computer executable instructions to automatically assign a priority to each resource according to the percentage of utilization of the resource.

Stone teaches providing computer executable instructions to automatically assign a priority to each resource according to the percentage of utilization of the resource. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 26:

Short doesn't appear to explicitly disclose providing computer executable instructions to adjust a status propagation logic based on the priority assigned to each resource.

Stone teaches providing computer executable instructions to adjust a status propagation logic based on the priority assigned to each resource. (Fig. 11, discloses that if the percentage of usage exceeds a determined percentage then the status of the resource will be changed)

With respect to claim 27:

Short doesn't appear to explicitly disclose providing computer executable instructions to present a resource utilization diagram to a user or requestor.

Stone teaches providing computer executable instructions to present a resource utilization diagram to a user or requestor. (Fig. 6, discloses presenting a resource utilization diagram in a user interface)

With respect to claim 29:

Short doesn't appear to explicitly disclose automatically assigning a priority to each resource according to the percentage of utilization of the resource.

Stone teaches automatically assigning a priority to each resource according to the percentage of utilization of the resource. (Column 6 Lines 45-55, discloses determining a resource value which is a usage percentage of a resource, this allows for controlling the execution of applications on said resource)

With respect to claim 30:

Short doesn't appear to explicitly disclose presenting a resource list and an associated priority for each resource to a user or requestor.

Stone teaches presenting a resource list and an associated priority for each resource to a user or requestor. (Fig. 11, discloses assigning priority to resources based on the percentage)

With respect to claim 31:

Short doesn't appear to explicitly disclose adjusting a status propagation logic based on the priority assigned to each resource.

Stone teaches adjusting a status propagation logic based on the priority assigned to each resource. (Fig. 11, discloses that if the percentage of usage exceeds a determined percentage then the status of the resource will be changed)

With respect to claim 32:

Short doesn't appear to explicitly disclose **presenting a resource utilization** diagram to a user or requestor.

Stone teaches presenting a resource utilization diagram to a user or requestor. (Fig. 6, discloses presenting a resource utilization diagram in a user interface)

#### (10) Response to Argument

Applicant claims a method for defining an IT service and tracking resource usage.

Short discloses a system for resource monitoring and cluster (IT service) creation.

Appellant argues that Short does not track resources that have been utilized in responding to a request.

In response, Examiner maintains that Short teaches "tracking resources that have been utilized in responding to a request or set of requests or performing a transaction or a set of transactions" Short (Column 5 Lines 11-22) discloses

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detecting changes (tracking) in the resource cluster while performing transactions. It also discloses that if a resource goes offline during a transaction a plurality of actions are taken so that the cluster service is aware of the this failure. Therefore the performance of the resources to execute transactions is being tracked.

Appellant also argues that instant application claims that the resource group is created by aggregating resources that have been utilized while Short discloses creating the cluster with resources needed to execute the transaction.

In response, Examiner maintains that Short teaches "automatically defining resources that form an IT service by aggregating all resources utilized to respond to all requests or to perform all transactions" Short (Column 5 Lines 55-65) discloses a resource group or cluster containing all the resources needed to run an application. This group of elements is defined by a dependency tree which stores the dependencies between the resources; said dependency defines (Column 7 Lines 55-65) the resources that are going to be added to a specific cluster service to fulfill a transaction. Therefore all the resources utilized to respond to a transaction will be added to the group.

resources that have been utilized" (argued) rather it reads "aggregating resources utilized" (claimed). The difference between this would be aggregating the resources based on a history of transactions (argued) and aggregating resources that are utilized to fulfill a request (claimed). The claimed limitation does not have to be based on a

history of transactions rather it can be based on a dependency between resources such as the one taught by Short.

Also the creation of the IT service in the claim is not related to the tracking of the resources; rather the creation of said IT service is solely based on resources used to fulfill transactions.

Appellant also argues that Short does not teach maintaining a record of the union of all resources that have been utilized in responding to each instance of a request or transaction over a selected time period or on a rolling time basis.

In, Response, Examiner maintains that Short teaches "maintaining a record of the union of all resources that have been utilized in responding to each instance of a request or transaction over a selected time period or on a rolling time basis" Short (Column 5 Lines 23-45) discloses that a log will be maintained, this log including cluster state information (union of resources) of a cluster during transaction execution. This log being consistently (selected time period) updated as to insure consistency of the cluster database in all systems.

# (11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mariela D Reyes/

Examiner, Art Unit 2167

May 19, 2009

#### Conferees:

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